

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-42. (canceled)

43. (new) An authentication scheme for a data transmission system the system comprising:

a user issuing an electronic frank to senders of data for which the user is the intended recipient;

associating the electronic frank in use with data to be transmitted over a telecommunications network to an intended recipient at a destination address;

validating the electronic frank using information contained by the electronic frank which is arranged to be authenticated;

processing the electronic frank to confirm if the frank meets at least one predetermined delivery criteria, the electronic frank being thus validated prior to the data being transmitted to the destination address, wherein the intended recipient determines said at least one predetermined delivery criteria for data to be transmitted to the intended recipient.

44. (new) A scheme as claimed by claim 43, wherein the data to be transmitted comprises an electronic mail message.

45. (new) A scheme as claimed in claim 44, wherein the electronic frank comprises a data attachment to the electronic mail message.

46. (new) A scheme as claimed in claim 43, wherein the electronic frank data structure comprises a digital wrapper certificate type data structure.

47. (new) A scheme as claimed in claim 43, wherein the electronic frank is associated with a predetermined cost-value.

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48. (new) A scheme as claimed in claim 47, wherein at least one predetermined criteria to which the electronic frank must conform is for the cost-value of the electronic frank to be the correct value associated with the data to be sent to the recipient.

49. (new) An electronic frank as claimed in claim 48, wherein the cost-value is determined by the intended recipient.

50. (new) An electronic frank arranged to be capable of being attached to data arranged for use in an authentication scheme as claimed in claim 43, the data comprising e-mail to be sent by a user of an electronic mail client application to an intended recipient via a telecommunications network, the electronic frank having a data structure which conforms to a predetermined format which enables certain delivery criteria to be applied when the electronic frank is processed by apparatus in the network, wherein the delivery criteria determine whether the recipient receives the e-mail.

51. (new) An electronic frank as claimed in claim 50, wherein the electronic frank is associated with a cost-value dependent on a set of at least one predetermined characteristics of the e-mail to which the frank is to be attached.

52. (new) An electronic frank as claimed in claim 50, wherein the electronic frank is associated with a cost-value dependent on a set of at least one predetermined characteristics of the e-mail to which the frank is to be attached and in which the electronic frank is issued is computed by an application which is operable to increase the cost value in the event of the e-mail being marked with a marker indicative of the priority of transmission to the intended recipient.

53. (new) A terminal arranged to enable a user to send data electronically to an intended recipient over a telecommunications network, the terminal comprising:

means for generating data electronically;

means operable to associate an electronic frank as claimed in claim 8 with the data prior to its transmission;

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means for displaying to a user of the terminal a visual indication representative of the electronic frank; and

means for transmitting the franked data via a telecommunications network to a destination address.

54. (new) A terminal as claimed in claim 53, wherein the terminal further comprises means operable to authenticate the information conveyed by the electronic frank prior to the franked data being sent by the apparatus and to include this authentication information within the data structure of the electronic frank.

55. (new) A terminal as claimed in claim 53, wherein the terminal further comprises means operable to authenticate the information conveyed by the electronic frank prior to the franked data being sent by the apparatus and to include this authentication information within the data structure of the electronic frank, and wherein said authentication information includes the address of the sender and/or the identity of the sender and/or that the franking cost-value of the electronic frank is the appropriate amount for the data being sent.

56. (new) A terminal as claimed in claim 53, wherein the means operable to associate an electronic frank with the data comprises means to automatically generate the frank and to automatically attach the frank to any data to be transmitted.

57. (new) Apparatus forming part of a telecommunications network and arranged to forward e-mail to a destination address, the apparatus further comprising:

data validation means arranged to validate an electronic frank according to an authentication scheme as claimed in claim 43, wherein the electronic frank has been attached to e-mail to be sent to a recipient over a communications network.

58. (new) Apparatus as claimed in claim 57, wherein the apparatus comprises the outgoing e-mail server of the user.

59. (new) Apparatus as claimed in claim 57, wherein the apparatus comprises the incoming e-mail server of the recipient of the e-mail.

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60. (new) Apparatus as claimed in claim 57, wherein the data validation means performs a validation process which authenticates the electronic frank.

61. (new) Apparatus as claimed in claim 57, wherein the apparatus performs a delivery criteria check process by processing an electronic frank according to predetermined delivery criteria, wherein said predetermined delivery criteria determine if the e-mail is to be delivered to the recipient.

62. (new) Apparatus as claimed in claim 57, wherein the apparatus performs a delivery criteria check process by processing an electronic frank according to predetermined delivery criteria, wherein said predetermined delivery criteria determine if the e-mail is to be delivered to the recipient, and wherein the delivery criteria is whether an electronic frank is attached having an appropriate cost-value for the data being sent.

63. (new) A method of generating an electronic frank arranged for use in an authentication scheme as claimed in claim 43, the electronic frank being associated with a unique identifier and comprising a data structure conforming to a predetermined data template, the method comprising the steps of:

receiving a request for an electronic frank from a requesting entity;

querying the requesting entity for information to determine at least one parameter-value to be contained within the data structure;

processing the information provided by the requesting entity;

generating a data structure using the processed information, the data structure containing the at least one parameter-value pair associated with a characteristic of the data to be sent; and

issuing the electronic franking data to the requesting entity.

64. (new) A method of filtering data sent over a telecommunications network towards an intended recipient, the method comprising, at a communications apparatus arranged to forward the data towards the intended recipient, the steps of:

receiving the data for forwarding to the intended recipient;

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processing the data to determine if it is associated with an electronic frank to implement an authentication scheme as claimed in claim 43; and,

if no electronic frank is found and/or if the electronic frank has a data structure which does not conform to a set of at least one predetermined criteria preventing the data from being forwarded to the intended recipient, or otherwise

forwarding the data to the intended recipient.

65. (new) A mail server arranged to implement the method of claim 64.

66. (new) A firewall component arranged to implement the method of claim 64.

67. (new) A signal in a communications network, the signal comprising data associated with an electronic frank implementing an authentication scheme according to claim 43.

68. (new) Software comprising a suite of one or more computer programs, the software being provided on a carrier medium and arranged in use to be run on one or more computer type devices to implement the scheme according to claim 43.

69. (new) Software comprising a suite of one or more computer programs, the software being provided on a carrier medium and arranged in use to be run on one or more computer type devices to implement a method according to claim 63.

70. (new) A method of providing bandwidth for a data transmission service over a communications network to a user who does not have prearranged access to the communications network at that bandwidth, the method comprising the steps of:

associating an electronic frank containing information arranged to be authenticated whereby the electronic frank can be validated and processed to confirm if the frank meets at least one predetermined delivery criteria, the electronic frank being thus validated prior to data being transmitted to an intended recipient at a destination address, with data to be sent using said data transmission service, said electronic frank being associated with a cost-value;

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providing a data transmission service to send and/or receive franked data over said communications network at said bandwidth.

71. (new) A method as claimed in claim 70, wherein the intended recipient issues the electronic frank to the user, the electronic frank in use arranged to be associated with data to be transmitted over a telecommunications network to the intended recipient at the destination address.

72. (new) A method as claimed in claim 70, wherein the intended recipient issues the electronic frank to the user, the electronic frank in use arranged to be associated with data to be transmitted over a telecommunications network to the intended recipient at the destination address, and wherein the intended recipient determines said at least one predetermined delivery criteria for data to be transmitted to the intended recipient.

73. (new) A method as claimed in claim 70, further comprising the step of said user obtaining said electronic frank prior to associating said electronic frank with said data to be sent.

74. (new) A method as claimed in claim 70, wherein said user purchases said electronic frank prior to associating said electronic frank with said data to be sent.

75. (new) A method of providing a predetermined bandwidth for a data transmission service to a user who does not have prearranged access to a communications network at that bandwidth, the method comprising the steps of:

enabling the user to indicate the desire to send data via a data transmission client application;

enabling the user to purchase an electronic frank containing information arranged to be authenticated whereby the electronic frank can be validated and processed to confirm if the frank meets at least one predetermined delivery criteria, the electronic frank being thus validated prior to data being transmitted to a destination address of an intended recipient,

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wherein the electronic frank is associated with said data and a cost-value associated with the electronic frank has been charged to the user, wherein the association of the electronic frank with the data enables the data transmission client application to send and/or receive franked data via a server connected to the communications network at the predetermined bandwidth.

76. (new) A method as claimed in claim 70, wherein the data comprises e-mail.

77. (new) Software comprising a suite of one or more computer programs, the software being provided on a carrier medium and arranged in use to be run on one or more computer type devices to implement the methods according to claim 70.